

Ibrahim Hasan

Mechatronic Specialist, IoT Expert, Coding Teacher, and Graphic Designer

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Summary

With experience in programming, robotics, embedded systems, and several IoT projects—from the device, communication system, API, and back end to the front end. Also skilled in teaching, design, and basic AI. Additionally, served as Head of the Research and Technology Department in the Electrical Engineering Student Association and as Leader of the UKKM Science and Robotics.

Skills & Tools

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| Technical Skill | : Embeded system, Frimeware engginer, Development and programming with Arduino and ESP32, PCB Designer, Front End, Back End, HTML, CSS, JavaScript, PHP, C++, C, Python. |
| Soft Skill | : Problem Solving, Team Colaboration, Leadership, Adaptive Learning. |
| Tools | : MATLAB, Simulink, Arduino, Sensors, Actuators, Microsoft Excel, Microsoft Word ,TensorFlow, NumPy, Pandas, Laravel, Firebase, Adobe Photohop, Adobe Illustrator, Capcut, and Davinci Resolve. |

Experience

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| Coder Academy | DKJ Jakarta, Jakarta Selatan |
| Programming Teacher - Part time | December 2024 - Present |
| <ul style="list-style-type: none">- Subjects Taught: Programming (Visual Block, JavaScript, HTML, CSS, Python), Arduino, Game Development, Web Development- Teaching Methods: Online individual tutoring, and Interactive sessions.- Tools and Technologies: Code.org, Scratch, EduBlock, Arduino, Roblox Studio, PyGame, etc.- Student Engagement: Teaching, mentoring, quizzes, projects, and provided feedback to enhance learning. | |
| BPH, UKKM Science and Robotic (Scibot), UAI | West Jakarta, Kebayoran Lama |
| Leader | March 2025 - Present |
| <ul style="list-style-type: none">- Competition Management: Created a platform for members to participate in robotics competitions, math science competition and other events. Sourced competition information, led competition teams, and assisted with innovations during competitions.- Training Programs: Organized and conducted training sessions in robotics, mathematics, and Science for member.- Program Innovation: create a research team to prepare for the upcoming competition for all students from various study programs, and create easy-to-learn training for students outside of engineering study programs. | |
| Physics laboratory, UAI | West Jakarta, Kebayoran Lama |
| Physics 1 & 2 lab assistant | October 2023 - Present |
| <ul style="list-style-type: none">- Subjects Taught: Physics 1 (Classical) and Physics 2 (Modern)- Teaching Methods: Pre-test sessions, practical experiment guidance, and lab report.- Tools and Technologies: Physics laboratory equipment (Newton's module, Archimedes' module, pendulum, resistors, capacitors, transformers).- Student Engagement: Provided guidance on experiments and data analysis, and assessed results from practical sessions and lab reports. | |
| Electrical and Microcontroler laboratory, UAI | West Jakarta, Kebayoran Lama |
| Microprocessor system lab assistant | April 2025 - Present |
| <ul style="list-style-type: none">- Subjects Taught: Microprocessor system (Z80) and Microcontroler (Arduino)- Teaching Methods: Pre-test sessions, practical experiment guidance, and lab report.- Tools and Technologies: Z80 Microprocessor Trainer, Proteus, Arduino.- Student Engagement: Provided guidance on experiments and data analysis, and assessed results from practical sessions and lab reports. | |
| Timedoor Academy | Tangerang, Green Lake City |
| Programming Teacher - Part time | June 2024 - February 2025 |
| <ul style="list-style-type: none">- Subjects Taught: Programming (Visual Block, JavaScript, HTML, CSS), Robotics, VR/AR Design, Game Development.- Teaching Methods: Interactive sessions, adaptive learning monitoring, and individual tutoring. | |

- **Tools and Technologies:** Code.org, Tynker, CoSpaces, Scratch, Construct, Microbit, Dash robot, etc.
- **Student Engagement:** Developed and assessed assignments, quizzes, and projects, and provided feedback to enhance learning.

Dept. of RISTEK, Electrical Engineering Student Association, UAI

Head of Department

West Jakarta, Kebayoran Lama

March 2024 - February 2025

- **Training Programs:** Organized and conducted training mathematics, and English for electrical engineering students.
- **Program Innovation:** Enhanced departmental programs by transforming the existing bulletin magazine into a more engaging and visually appealing feed instagram format.
- **Flagship Program:** Initiated and led the Elektro Company Visit program to PT Garuda Maintenance Facility Aero Asia in Tangerang City, Banten.

BPH, UKKM Science and Robotic (Scibot), UAI

Vice Leader

West Jakarta, Kebayoran Lama

March 2024 - February 2025

- **Competition Management:** Created a platform for members to participate in robotics competitions, math science competition and other events. Sourced competition information, led competition teams, and assisted with innovations during competitions.
- **Training Programs:** Organized and conducted training sessions in robotics, mathematics, and Science for member.
- **Program Innovation:** create easy-to-learn training for students outside of engineering study programs.

Dept. of Infokom, Electrical Engineering Student Association, UAI

Member of Department

West Jakarta, Kebayoran Lama

March 2023 - February 2024

- **Responsibilities:** Managed the association's social media platforms, documented departmental events through photography, videography, and archiving, and assisted in designing visual content for various publications.
- **Innovations:** Designed the official logo for the cabinet.

BPH, UKKM Science and Robotic (Scibot), UAI

Secretary 2

West Jakarta, Kebayoran Lama

March 2023 - February 2024

- **Responsibilities:** Assisted Secretary 1 in proposal writing, member data organization, and administrative tasks. Supported member participation in robotics, math, and science competitions, including sourcing events and assisting project development.

Sosial Peduli Elektro (Sospetro), UAI

Secretary

West Jakarta, Kebayoran Lama

October 2022

- **Responsibilities:** Served as Secretary in the event organizing committee. Prepared the official event proposal and compiled the accountability report (laporan pertanggungjawaban) post-event. Ensured clear documentation and administrative support throughout the program.

Social Emproment, DKA UAI

Secretary

West Jakarta, Kebayoran Lama

December 2022 - February 2023

- **Responsibilities:** Served as Secretary in the event organizing committee. Prepared the official event proposal and compiled the accountability report (laporan pertanggungjawaban) post-event.

Education

Universitas Al-Azhar Indonesia

Sarjana Teknik Elektro

DKJ Jakarta, Jakarta Selatan

September 2022 - Present

- **Field of Study:** Electrical Engineering (Mechatronic)
- **Key Courses:** Fundamentals of Programming, Electrical Circuits 1 & 2 (including labs), Digital Circuits (including labs), Microprocessor Systems, Basic Electronics, Calculus 1 & 2, etc.
- **Current GPA:** 3.17/4.00
- **Academic Projects:** Developed Smart farming IoT with website monitoring and controlling, health monitoring system for HRD with real-time communication using Firebase, robotic hand, Tesla coil, and DIY prototypes including an electric generator, among other projects.